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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,712	12/23/2003	Melvin Robert Jackson	128521-1	5885
6147 7590 06/06/2007 GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309			EXAMINER ROE, JESSEE RANDALL	
			ART UNIT 1742	PAPER NUMBER
			MAIL DATE 06/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/747,712	Applicant(s) JACKSON ET AL.	
	Examiner Jessee Roe	Art Unit 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 23-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 1-6, 10-14 and 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>22 December 2003 &amp; 19 May 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 1-22 are currently under examination and claims 23-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected method of manufacturing a coil spring. Election was made without traverse in the reply filed on 16 October 2006. Applicant's election with traverse of claims 1-22 in the reply filed on 16 October 2006 is acknowledged.

### ***Claim Objections***

Claims 1-6, 10-14, and 20-22 objected to because of the following informalities: "atom percent" should be replaced with "atomic percent" for each occurrence within the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson et al. (US 6,623,692).

In regards to claims 1-4, Jackson et al. ('692) disclose a rhodium-based alloy comprising up to about 10 atomic percent palladium; up to about 4 atomic percent

tungsten; and from about 1.5 – 4 atomic percent ruthenium, which overlaps the composition of the instant invention, which is a prima facie case of obviousness (see claim 14). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions from the compositions disclosed by Jackson et al. ('692) because Jackson et al. ('692) disclose the same utility throughout the disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Jackson et al. ('692) would have the A1-structured phase when subjected to the same treatment temperature because Jackson et al. ('692) disclose substantially the same composition and substantially similar properties would expected. See MPEP 2112.01 I.

Still regarding claim 1, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, palladium, platinum and iridium would not be essential elements according to claim 1, because "up to" includes 0 atomic percent.

Still regarding claim 4 and in regards to claim 5, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and the elements of the actinide series would not be essential elements according to claims 4-5, because "up to" includes 0 atomic percent.

In regards to claim 6, Jackson et al. ('692) disclose wherein up to 3 atomic

percent of zirconium, titanium, tantalum, and hafnium would be added to the rhodium-based alloy (claim 17).

In regards to claim 7, Jackson et al. ('692) disclose a graph of oxidation data and oxidation resistance (oxide forming underneath the surface (col. 2, line 39, col. 3, lines 8-27, col. 5, lines 43-58 and Figure 2). Therefore, it would be expected that oxide particles would be dispersed in the alloy.

In regards to claim 8, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, the oxide particles would not be essential according to claim 8, because "up to" includes 0 volume percent.

In regards to claim 9, Jackson et al. ('692) disclose wherein up to 3 atomic percent of zirconium, titanium, tantalum, and hafnium would be added to the rhodium-based alloy (claim 17). Because none of these elements would comprise the majority of the alloy, it would be expected that these elements would be dissolved in the rhodium alloy (a solute).

In regards to claim 10, Jackson et al. ('692) disclose a rhodium-based alloy comprising up to about 10 atomic percent palladium; up to about 4 atomic percent tungsten; and from about 1.5 – 4 atomic percent ruthenium. Jackson et al. ('692) further disclose wherein up to 3 atomic percent of zirconium, titanium, tantalum, and hafnium would be added to the rhodium-based alloy (claim 17). The Examiner notes that composition disclosed by Jackson et al. ('692) overlaps the composition of the instant invention, which is a prima facie case of obviousness (see claim 14). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to select the claimed compositions from the compositions disclosed by Jackson et al. ('692) because Jackson et al. ('692) disclose the same utility throughout the disclosed ranges.

Still regarding claim 10, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and the elements of the actinide series would not be essential elements according to claim 10, because "up to" includes atomic percent percent.

Still regarding claim 10, it would be expected that the atomic percent of the rhodium and the first material would be at least 85 atomic percent because Jackson et al. ('692) necessitates only the presence of ruthenium from about 1.5 – 4 atomic percent.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Jackson et al. ('692) would have the A1-structured phase when subjected to the same treatment temperature because Jackson et al. ('692) disclose substantially the same composition and substantially similar properties would expected. See MPEP 2112.01 I.

In regard to claims 11-13, Jackson et al. ('692) disclose a rhodium-based alloy that would be used in gas turbine engines comprising up to about 10 atomic percent palladium; up to about 4 atomic percent tungsten; and from about 1.5 – 4 atomic percent ruthenium, which overlaps the composition of the instant invention, which is a

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prima facie case of obviousness (col. 2, line 44 – col. 3, line 5 and claim 14). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions from the compositions disclosed by Jackson et al. ('692) because Jackson et al. ('692) disclose the same utility throughout the disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Jackson et al. ('692) would have the A1-structured phase when subjected to the same treatment temperature because Jackson et al. ('692) disclose substantially the same composition and substantially similar properties would <sup>be</sup> expected. See MPEP 2112.01 I.

Still regarding claim 11, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, palladium, platinum and iridium would not be essential elements according to claim 1, because "up to" includes 0 atomic percent.

Still regarding claim 13, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium and chromium would not be essential elements according to claim 13, because "up to" includes 0 atomic percent.

In regards to claim 14, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and the elements of the actinide

series would not be essential elements according to claim 14, because "up to" includes atomic percent.

In regards to claim 15, Jackson et al. ('692) disclose a graph of oxidation data and oxidation resistance (oxide forming underneath the surface) (col. 2, line 39, col. 3, lines 8-27, col. 5, lines 43-58 and Figure 2). Therefore, it would be expected that oxide particles would be dispersed in the alloy.

In regards to claim 16-17 and 19, Jackson et al. ('692) disclose wherein the alloy would be used for blades and vanes (col. 2, lines 57-67).

In regards to claim 20, Jackson et al. ('692) disclose a method for making a gas turbine article (which would inherently be used in high temperature, oxidative environments) made from a rhodium-based alloy comprising up to about 10 atomic percent palladium; up to about 4 atomic percent tungsten; and from about 1.5 – 4 atomic percent ruthenium, which overlaps the composition of the instant invention, which is a prima facie case of obviousness (col. 4, line 59 – col. 6, line 18 and claim 14). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions from the compositions disclosed by Jackson et al. ('692) because Jackson et al. ('692) disclose the same utility throughout the disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Jackson et al. ('692) would have the A1-structured phase when subjected to the same treatment temperature because Jackson



et al. ('692) disclose substantially the same composition and substantially similar properties would be expected. See MPEP 2112.01 I.

Still regarding claim 20, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, palladium, platinum, iridium, zirconium yttrium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and elements of the actinide series would not be essential elements according to claim 20, because "up to" includes 0 atomic percent.

Still regarding claim 20, it would be expected that the atomic percent of the rhodium and the first material would be at least 85 atomic percent because Jackson et al. ('692) necessitates only the presence of ruthenium from about 1.5 – 4 atomic percent.

In regards to claim 21, Jackson et al. ('692) disclose a method for making a gas turbine article (which would inherently be used in high temperature, oxidative environments) made from a rhodium-based alloy comprising up to about 10 atomic percent palladium; up to about 4 atomic percent tungsten; and from about 1.5 – 4 atomic percent ruthenium, which overlaps the composition of the instant invention, which is a prima facie case of obviousness (see claim 14). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions from the compositions disclosed by Jackson et al. ('692) because Jackson et al. ('692) disclose the same utility throughout the

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disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Jackson et al. ('692) would have the A1-structured phase when subjected to the same treatment temperature because Jackson et al. ('692) disclose substantially the same composition and substantially similar properties would expected. See MPEP 2112.01 I.

In regards to claim 22, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, zirconium yttrium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and elements of the actinide series would not be essential elements according to claim 20, because "up to" includes 0 atomic percent.

.Claims 1-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hensel et al. (US 2,370,242).

In regards to claim 1-4, Hensel et al. ('242) disclose an intermediate compound made from 0.01 to 90 percent (inherently by weight) palladium-platinum group metal (which would include palladium, platinum or rhodium and 10 to 99 percent (inherently by weight) refractory metal (which would include tungsten and molybdenum), which is a prima facie case of obviousness (pg. 1, col. 1, line 1 – pg. 2, col. 2, line 9). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions from the compositions disclosed by Hensel et al. ('242) because Hensel et al. ('242) disclose the same utility throughout

the disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Hensel et al. ('242) would have the A1-structured phase when subjected to the same treatment temperature because Hensel et al. ('242) disclose substantially the same composition and substantially similar properties would expected. See MPEP 2112.01 I.

Still regarding claim 1, the claim language "up to" indicates that the presence of a particular element would not be non-essential. In this case, ruthenium, chromium, palladium, platinum and iridium would not be essential elements according to claim 1, because "up to" includes 0 atomic percent.

Still regarding claim 4 and in regards to claim 5, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and the elements of the actinide series would not be essential elements according to claims 4-5, because "up to" includes 0 atomic percent.

In regards to claim 10, Hensel et al. ('242) disclose a compound made from 0.01 to 90 percent (inherently by weight) palladium-platinum group metal (which would include palladium, platinum or rhodium and 10 to 99 percent (inherently by weight) refractory metal (which would include tungsten and molybdenum), which is a prima facie case of obviousness (pg. 1, col. 1, lines 1-34). See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select

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the claimed compositions from the compositions disclosed by Hensel et al. ('242) because Hensel et al. ('242) disclose the same utility throughout the disclosed ranges.

In regards to limitation wherein "said alloy comprises an A1-structured phase at temperatures greater than about 1000°C in an amount of at least about 90% by volume", the Examiner asserts that the alloy of Hensel et al. ('242) would have the A1-structured phase when subjected to the same treatment temperature because Hensel et al. ('242) disclose substantially the same composition and substantially similar properties would expected. See MPEP 2112.01 I.

Still regarding claim 10, the claim language "up to" indicates that the presence of a particular element would not be essential. In this case, ruthenium, chromium, palladium, platinum, iridium, zirconium, yttrium, hafnium, tantalum, aluminum, titanium, scandium, elements of the lanthanide series, and elements of the actinide series would not be essential elements according to claim 10, because "up to" includes 0 atomic percent.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson et al. (US 6,623,692) as applied to claim 17 above, and further in view of Manty et al. (US 4,305,998).

In regards to claim 18, Jackson et al. ('692) disclose a rhodium-based alloy comprising up to about 10 atomic percent palladium; up to about 4 atomic percent tungsten; and from about 1.5 – 4 atomic percent ruthenium, but Jackson et al. ('692) do not specify wherein the alloy would be used as a coating.

Manty et al. ('998) disclose applying protective coating to an aircraft engine

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component wherein the coating made of chromium, molybdenum, niobium, tantalum, vanadium, zirconium, platinum, or rhodium or a combination thereof or alloy of any of these metals (abstract and col. 1, lines 12-20). This coating would prevent degradation of substrate engineering or mechanical properties (abstract and col. 1, lines 12-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the rhodium-based alloy, as disclosed by Jackson et al. ('692), as a coating for an aircraft engine component, as disclosed by Manty et al. ('998), in order to prevent degradation of substrate engineering or mechanical properties, as disclosed by Manty et al. ('998) (abstract).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No.10/636407. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed compositions are overlapped by the claims of co-pending application 10/636407.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-17 and 19-20 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14 and 17-29 of U.S. Patent No. 6,623,692. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed compositions are overlapped by the compositions and application of the alloy of claims 14 and 17-29 of US Patent No. 6,623,692.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

  
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